INDEX TO VOLUME 27 1992

Index to Authors and Contributors

AFAGH, F. F. *Paper* Anisotropic stress analysis of inclusion problems using the boundary integral equation method, 67

BIGWOOD, D. A. *Paper* Development of a full elasto-plastic adhesive joint design analysis, 211
BOURKE, M. A. M. *Paper* Interpretation of residual stress distributions in previously loaded cracked beams, 77
BRIDGFORD, N. *Paper* Constitutive modelling of the elastic–plastic behaviour of 7050-T7451 aluminium alloy, 85

CANTWELL, W. J. *Paper* The significance of damage and defects and their detection in composite materials: a preview, 29
CHAMBERS, A. C. *Paper* Creep fatigue crack growth in Jethete M152 at 550°C under mixed mode conditions, 49
CHANDRASHEKHARA, K. *Technical note* A photoelastic approach to framed structure–foundation beam–soil interaction, 245
CROCOMBE, A. D. *Paper* Development of a full elasto-plastic adhesive joint design analysis, 211
CUI, W. C. *Paper* Failure mechanisms in three and four point short beam bending tests of unidirectional glass/epoxy, 235

de MELO, F. J. M. Q. *Paper* The linear elastic in-plane bending of curved hollow profiles having a thin-walled rectangular section, 145
DRAGONI, E. *Paper* Effect of nut geometries on screw thread distribution: photoelastic results, 1

FESSLER, H. *Papers* A model technique for bending strength of tubular joints, 197. An assessment of frozen stress photoelasticity, 123

GAO, Y. L. *Paper* Anisotropic stress analysis of inclusion problems using the boundary integral equation method, 67
GRANT, C. *Paper* Shear centre of thin-walled sections, 151

HASSELL, W. *Paper* A model technique for bending strength of tubular joints, 197
HAYHURST, D. R. *Paper* Modelling of the performance of leather in a uni-axial shoe-last simulator, 187
HILLS, D. A. *Paper* The design of joints between elastically dissimilar components (with special reference to ceramic/metal joints), 15
HODGSON, A. P. *Paper* Interpretation of residual stress distributions in previously loaded cracked beams, 77
HOSE, D. R. *Paper* The influence of the variation in wall thickness of glass fibre reinforced plastic pipe bends subjected to in-plane bending, 113
HOWARD, I. C. *Paper* Modelling of the performance of leather in a uni-axial shoe-last simulator, 187
HUANG, Y. P. *Paper* Free bending characteristics of sheathed spiral strands under cyclic loading, 219
HYDE, T. H. *Papers* Creep–fatigue crack growth in Jethete M 152 at 550°C under mixed mode conditions, 49. A model technique for bending strength of tubular joints, 197. Stresses near narrow rectangular notches, with rounded corners, in beams in bending, 227

JONES, M. *Paper* Failure mechanisms in three and four point short beam bending tests of unidirectional glass/epoxy, 235
JONES, R. *Paper* Constitutive modelling of the elastic–plastic behaviour of 7050-T7451 aluminium alloy, 85

KARROUM, C. *Paper* An evaluation of mechanical strength test specimens for brittle materials, 101
KATO, A. *Paper* Design equation for stress concentration factors of notched strips and grooved shafts, 21
KELLY, P. A. *Paper* The design of joints between elastically dissimilar components (with special reference to ceramic/metal joints), 15
KITCHING, R. *Paper* The influence of the variation in wall thickness of glass fibre reinforced plastic pipe bends subjected to in-plane bending, 113
KURUPPU, M. D. *Paper* Constitutive modelling of the elastic–plastic behaviour of 7050-T7451 aluminium alloy, 85

LI, D. S. *Paper* Non-linear stress–strain behaviour of unidirectional silicon carbide fibre reinforced aluminium alloy, 137
LIN, J. *Paper* Modelling of the performance of leather in a uniaxial shoe-last simulator, 187
LIU, Y. *Paper* The residual stress and strain solutions of autofrettaged pressure vessels with a cone and cylinder connection, 7

MORI, K. *Paper* Deformation and strength of stepped-lap joints bonded with adhesive resin, 171
MORTON, J. *Paper* The significance of damage and defects and their detection in composite materials: a preview, 29
MURUGAPPAN, K. R. *Technical note* A photoelastic approach to framed structure–foundation beam–soil interaction, 245

NOWELL, D. *Paper* The design of joints between elastically dissimilar components (with special reference to ceramic/metal joints), 15

ONG, J. H. *Paper* Experimental and finite element investigation of a local dent on a pressurized pipe, 177
ONG, L. S. *Paper* Experimental and finite element investigation of a local dent on a pressurized pipe, 177

PETRIE, C. J. S. *Paper* Finite deformation of compressible bonded rubber mounts, 157
PHILIPPIDIS, T. P. *Paper* True bounds on Poisson's ratios for transversely isotropic solids, 43

RAOOF, M. *Papers* Free bending fatigue of axially pre-loaded spiral strands, 127. Free bending characteristics of sheathed spiral strands under cyclic loading, 219
REDEKOP, D. *Paper* Local loads on a toroidal shell, 59
REEDMAN, D. C. *Paper* Modelling of the performance of leather in a uni-axial shoe-last simulator, 187

SHARIFF, M. H. B. M. *Paper* Finite deformation of compressible bonded rubber mounts, 157
SHEN, N. J. *Paper* The residual stress and strain solutions of autofrettaged pressure vessels with a cone and cylinder connection, 7
SMITH, D. J. *Paper* Interpretation of residual stress distributions in previously loaded cracked beams, 77
SOH, A. K. *Papers* An improved method for determining free boundary stresses, 93. Experimental and finite element investigation of a local dent on a pressurized pipe, 177
STANLEY, P. *Paper* An evaluation of mechanical strength test specimens for brittle materials, 101
STOUFFER, D. C. *Paper* Constitutive modelling of the elastic–plastic behaviour of 7050-T7451 aluminium alloy, 85
SUGIBAYASHI, T. *Paper* Deformation and strength of stepped-lap joints bonded with adhesive resin, 171

TAN, C. L. *Paper* Anisotropic stress analysis of inclusion problems using the boundary integral equation method, 67
THEOCARIS, P. S. *Paper* True bounds on Poisson's ratios for transversely isotropic solids, 43

VAZ, M. A. P. *Paper* The linear elastic in-plane bending of curved hollow profiles having a thin-walled rectangular section, 145

WANG, L. L. *Paper* Application of Moiré shearing interferometry to slope measurement of shallow shells, 45
WEBSTER, G. A. *Paper* Interpretation of residual stress distributions in previously loaded cracked beams, 77
WEBSTER, P. J. *Paper* Interpretation of residual stress distributions in previously loaded cracked beams, 77
WILLIAMS, J. F. *Paper* Constitutive modelling of the elastic–plastic behaviour of 7050-T7451 aluminium alloy, 85
WISNOM, M. R. *Papers* Non-linear stress–strain behaviour of unidirectional silicon carbide fibre reinforced aluminium alloy, 137. Failure mechanisms in three and four point short beam bending tests of unidirectional glass/epoxy, 235

YAGHI, A. *Paper* Stresses near narrow rectangular notches, with rounded corners, in beams in bending, 227
YUN, D. Z. *Paper* Application of Moiré shearing interferometry to slope measurement of shallow shells, 45

ZHANG, F. *Paper* Local loads on a toroidal shell, 59

Subject Index

A MODEL TECHNIQUE FOR BENDING STRENGTH OF TUBULAR JOINTS, *Paper*, 197
A PHOTOELASTIC APPROACH TO FRAMED STRUCTURE–FOUNDATION BEAM–SOIL INTERACTION, *Paper*, 245
Adhesive joint design analysis, 211
Adhesive resin, 171
Aluminium alloy, 85, 137
AN ASSESSMENT OF FROZEN STRESS PHOTOELASTICITY, *Paper*, 123
AN EVALUATION OF MECHANICAL STRENGTH TEST SPECIMENS FOR BRITTLE MATERIALS, *Paper*, 101
AN IMPROVED METHOD FOR DETERMINING FREE BOUNDARY STRESSES, *Paper*, 93
Analysis:
  joint design, 211
  of inclusion problems, 67
  stress, 67
ANISOTROPIC STRESS ANALYSIS OF INCLUSION PROBLEMS USING THE BOUNDARY INTEGRAL EQUATION METHOD, *Paper*, 67
APPLICATION OF MOIRÉ SHEARING INTERFEROMETRY TO SLOPE MEASUREMENT OF SHALLOW SHELLS, *Paper*, 45
Autofrettaged pressure vessels, 7
Axially pre-loaded spiral strands, 127

Beam bending tests, 235
Beam–soil interaction, 245
Beams:
  cracked, 77
  in bending, 227
Bending:
  characteristics of sheathed spiral strands, 219
  fatigue, 127
  in beams, 227
  in-plane, 113
  linear elastic, 145
  strength of tubular joints, 197
  tests of short beams, 235
Bends, plastic pipe, 113
Behaviour:
  of unidirectional silicon carbide fibre reinforced aluminium alloy, 137
  of 7050-T7451 aluminium alloy, 85
Bonded rubber mounts, finite deformation of, 157
Boundary:
  integral equation method, 67
  stresses, 93
Bounds on Poisson's ratios, 101
Brittle materials, 101

Ceramic joints, 15
Composite materials, 29
Compressible bonded rubber mounts, 157
Cone connection, 7
CONSTITUTIVE MODELLING OF THE ELASTIC–PLASTIC BEHAVIOUR OF 7050-T7451 ALUMINIUM ALLOY, *Paper*, 85
Crack growth:
  creep–fatigue, 49
  in Jethete M152, 49
Cracked beams, previously loaded, 77
CREEP–FATIGUE CRACK GROWTH IN JETHETE M152 AT 550°C UNDER MIXED MODE CONDITIONS, *Paper*, 49
Curved hollow profiles, 145
Cyclic loading, 219
Cylinder connection, 7

Damage, significance of, 29
Defects, significance of, 29
Deformation of compressible bonded rubber mounts, 157
DEFORMATION AND STRENGTH OF STEPPED-LAP JOINTS BONDED WITH ADHESIVE RESIN, *Paper*, 171
Design analysis, joint, 211, *see also* Design of joints
DESIGN EQUATION FOR STRESS CONCENTRATION FACTORS OF NOTCHED STRIPS AND GROOVED SHAFTS, *Paper*, 21
Design of joints, 15, *see also* Design analysis, joint
Determining free boundary stresses, 93
DEVELOPMENT OF A FULL ELASTO-PLASTIC ADHESIVE JOINT DESIGN ANALYSIS, *Paper*, 211

EFFECT ON NUT GEOMETRIES ON SCREW THREAD DISTRIBUTION: PHOTOELASTIC RESULTS, *Paper*, 1
Elastic–plastic behaviour of 7050-T7451 aluminium alloy, 85
Elastically dissimilar components, 15
Elasto-plastic adhesive joint design analysis, 211
Equation for stress concentration factors, 21
EXPERIMENTAL AND FINITE ELEMENT INVESTIGATION OF A LOCAL DENT ON A PRESSURIZED PIPE, *Paper*, 177

FAILURE MECHANISMS IN THREE AND FOUR SHORT BEAM BENDING TESTS OF UNIDIRECTIONAL GLASS/EPOXY, *Paper*, 235
Fatigue, free bending, 127
FINITE DEFORMATION OF COMPRESSIBLE BONDED RUBBER MOUNTS, *Paper*, 157
Finite element investigation of a local dent, 177
Framed structure–foundation beam–soil interaction, a photoelastic approach to, 245
Free bending characteristics of sheathed spiral strands under cyclic loading, 219
FREE BENDING FATIGUE OF AXIALLY PRE-LOADED SPIRAL STRANDS, *Paper*, 127
Free boundary stresses, 93
Frozen stress photoelasticity, 123
Full elasto-plastic adhesive joint design analysis, 211

Glass/epoxy, 235
Glass fibre reinforced plastic pipe bends, 113
Grooved shafts, 21

Hollow profiles, curved, 145

Inclusion problems, anisotropic stress analysis of, 67
In-plane bending, 113, 145
Interaction, framed structure–foundation, beam–soil, 245
Interferometry, Moiré shearing, 45
INTERPRETATION OF RESIDUAL STRESS DISTRIBUTIONS IN PREVIOUSLY LOADED CRACKED BEAMS, *Paper*, 77
Investigation of a local dent on a pressurized pipe, 177
Isotropic solids, 43

Jethete M152, crack growth in, 49
Joints:
  between elastically dissimilar components, 15
  ceramic, 15
  design analysis, 211
  design of, 15
  metal, 15
  tubular, 197
  stepped-lap, 171

Leather, performance of, 187
Linear elastic in-plane bending, 145
Loaded cracked beams, 77
Loading, cyclic, 219
Loads:
  local, 59
  on a toroidal shell, 59
Local dent, experimental and finite element investigation of, 177
LOCAL LOADS ON A TOROIDAL SHELL, *Paper*, 59

Materials:
brittle, 101
composite, 29
Mechanical strength test specimens, evaluation of, 101
Metal joints, 15
Method for determining free boundary stresses, 93
Mixed mode conditions, 49
Modelling of the elastic–plastic behaviour of 7050-T7451 aluminium alloy, 85
MODELLING OF THE PERFORMANCE OF LEATHER IN A UNIAXIAL SHOE-LAST SIMULATOR, *Paper*, 187
Moiré shearing interferometry, 45

Narrow rectangular notches with rounded corners, 227
NON-LINEAR STRESS–STRAIN BEHAVIOUR OF UNIDIRECTIONAL SILICON CARBIDE FIBRE REINFORCED ALUMINIUM ALLOY, *Paper*, 137
Notched strips, 21
Notches, narrow rectangular, 227
Nut geometries, 1

Performance of leather in a uni-axial shoe-last simulator, 187
Photoelastic results, 1
Photoelasticity, frozen stress, 123
Pipe bends, plastic, 113
Poisson's ratios, true bounds on, 43
Pre-loaded spiral strands, 127
Pressure vessels, autofrettaged, 7
Pressurized pipe, local dent on, 177
Previously loaded cracked beams, 77
Profiles, curved hollow, 145

Rectangular notches with rounded corners, 227
Reinforced aluminium alloy, 137
Residual stress:
and strain solutions, 7
distributions, 77
Resin, adhesive, 171
Rounded corners, narrow rectagular notches with, 227
Rubber mounts, bonded, 157

Screw thread distribution, effect of nut geometries on, 1
Shafts, grooved, 21
Shallow shells, slope measurement of, 45
SHEAR CENTRE OF THIN-WALLED SECTIONS, *Paper*, 151
Shearing interferometry, 145
Sheathed spiral strands, 219
Shell, toroidal, 59
Shells, shallow, 45
Shoe-last simulator, 187
Short beam bending tests, 239
Significance of damage and defects, 29
Silicon carbide fibre reinforced aluminium alloy, unidirectional, 137
Simulator, shoe-last, 187
Slope measurement of shallow shells, 45
Solids, transversely isotropic, 43
Spiral strands, pre-loaded, 127
Strain-solutions, residual, 7
Strands:
sheathed spiral, 219
spiral, 127
Stepped-lap joints, deformation and strength of, 171
Strength:
bending, 197
of stepped-lap joints, 171
Stress analysis:
anisotropic, 67
analysis of inclusion problems, 67
Stresses, boundary, 93
Stress:
distributions, residual, 77
concentration factors, 21
photoelasticity, 123
solutions, residual, 7
Stress–strain behaviour, 137
STRESSES NEAR NARROW RECTANGULAR NOTCHES WITH ROUNDED CORNERS, IN BEAMS IN BENDING, *Paper*, 227
Strips, notched, 21
Structure–foundation beam–soil interaction, 245

Technique for bending strength of tubular joints, 197
Test specimens for brittle materials, 101
THE DESIGN OF JOINTS BETWEEN ELASTICALLY DISSIMILAR COMPONENTS (WITH SPECIAL REFERENCE TO CERAMIC/METAL JOINTS), *Paper*, 15
THE INFLUENCE OF THE VARIATION IN WALL THICKNESS OF GLASS FIBRE REINFORCED PLASTIC PIPE BENDS SUBJECTED TO IN-PLANE BENDING, *Paper*, 113
THE LINEAR ELASTIC IN-PLANE BENDING OF CURVED HOLLOW PROFILES HAVING A THIN-WALLED RECTANGULAR SECTION, *Paper*, 145
THE RESIDUAL STRESS AND STRAIN SOLUTIONS OF AUTOFRETTAGED PRESSURE VESSELS WITH A CONE AND CYLINDER CONNECTION, *Paper*, 7
THE SIGNIFICANCE OF DAMAGE AND DEFECTS AND THEIR DETECTION IN COMPOSITE MATERIALS: A PREVIEW, *Paper*, 29
Thin-walled rectangular section, curved hollow profiles having a, 145
Thin-walled sections, shear centre of, 151
Three and four point short beam bending tests, 235
Toroidal shell, local loads on, 59
Transversely isotropic solids, 43
TRUE BOUNDS ON POISSON'S RATIOS FOR TRANSVERSELY ISOTROPIC SOLIDS, *Paper*, 43
Tubular joints, 197

Uni-axial shoe-last simulator, 187
Unidirectional:
glass/epoxy, 235
silicon carbide fibre reinforced aluminium alloy, 137

Variation in wall thickness of glass fibre reinforced plastic pipe bends, 113
Wall thickness of glass fibre reinforced plastic pipe bends, variation in, 113